BULLETIN

OF

The American Gastroscopic Society

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VOL. II DECEMBER, 1949 No. 1

CLUB NEWS

The following officers have been elected for the new year:

President — Jos. B. Kirsner, M.D.
950 E. 59th Street, Chicago 37

Vice President — James B. Carey, M.D.
Nicollet Clinic, 1009 Nicollet Ave., Minneapolis

Secretary-Treasurer — H. Marvin Pollard, M.D.
University Hospital, Ann Arbor, Mich.

Members of the Governing Board for the new year include the following:

J. L. Borland, Jacksonville, Fla.
E. B. Benedict, Boston, Mass.
J. H. Fitzgibbon, Portland, Ore.
H. J. Moersch, Rochester, Minn.

MINUTES OF THE ANNUAL MEETING OF THE AMERICAN GASTROSCOPIC SOCIETY

Hotel Claridge, Atlantic City, N. J.
June 3 and 4, 1949

The Fifth Annual Meeting of the American Gastroscopic Society was held at the Hotel Claridge, Atlantic City, N. J., on June 3 and 4, 1949. A total of sixty-six members registered for the Session.

On Friday, June 2, 1949, a cocktail party and dinner were held at the Hotel Claridge. This was attended by sixty-nine members and guests. Following the cocktail party, a business meeting of the Society was held.

The reports of the Secretary and Treasurer were accepted and read.

Dr. H. Marvin Pollard, Editor of the Bulletin, reported on the difficulties encountered by the Editorial Staff in securing material adequate for publication in the Bulletin. Members were urged to submit suitable material.

Dr. Roy Lyman Sexton, Chairman of the Instrument Committee, reported on the action taken by his Committee to secure the cooperation of the instrument companies in the educational program of the Society. He reported that all of the manufacturers were extremely cooperative.

Dr. John H. Fitzgibbon, Chairman of the Nominating Committee presented the following nominations for office: President, Dr. Joseph B. Kirsner; Vice President, Dr. James B. Carey; Secretary-Treasurer, Dr. H. Marvin Pollard; members of the Governing Board, Dr.

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THE DIFFERENTIAL DIAGNOSIS OF BENIGN AND MALIGNANT LESIONS OF THE STOMACH BY MEANS OF THE FLEXIBLE OPERATING GASTROSCOPE

By EDWARD B. BENEDICT, M.D.
Boston, Mass.

Benedict calls attention to the fact that for many years it has been possible to obtain biopsies at the time of laryngoscopy, bronchoscopy, esophagoscopy, thoracoscopy, peritoneoscopy, cystoscopy, and proctoscopy. These procedures, however, have been relatively simple compared to direct visualization and biopsy of the stomach. In June 1948, the first practicable operating gastroscope was presented by the author at a joint meeting of the American Gastroscopic Society and the American Gastroenterological Association. Since March 1948, over 63 biopsies have been obtained with no accidents and no complications. The author presents cases indicating that the most valuable use of gastroscopic biopsy is in the diagnosis of lymphoma, carcinoma, and gastritis.

In discussing these cases it is pointed out that a positive biopsy proving *lymphoma* of the stomach clinches a diagnosis that is otherwise either suppositious or impossible. Since Lymphoma is usually a diffuse process, a negative biopsy probably excludes it with reasonable certainty. It is further pointed out that a positive gastroscopic biopsy for *carcinoma* may clinch an otherwise doubtful diagnosis.

On the other hand, a negative biopsy does not exclude carcinoma: first, because the biopsy may have been taken from a benign area near a carcinoma, or secondly, because the biopsy forceps may not have penetrated deeply enough to get a representative specimen. With regard to *sarcoma,* a positive gastroscopic biopsy is helpful and irrefutable, but a negative biopsy does not exclude sarcoma.

With reference to a *benign tumor,* a positive gastroscopic biopsy showing adenomatous polyp, or neurofibroma does not exclude the possibility of malignant change in areas of the tumor not included in the biopsy. The chief value of such a biopsy would be to confirm a clinical radiologic and gastroscopic impression of benign tumor in a patient who is a poor surgical risk or who will not consent to surgery for a probably benign lesion.

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THE ROLE OF GASTROSCOPY IN THE DIAGNOSIS OF UPPER GASTRO-INTESTINAL HEMORRHAGE OF OBSCURE ORIGIN*

ARTHUR OLSEN, M.D. and HERMAN MOERSCH, M.D.
Division of Medicine, Mayo Clinic, Rochester, Minn.

Hemorrhage from the upper portion of the gastro-intestinal tract is always an alarming experience. Not infrequently the source of such bleeding may present an extremely diagnostic problem. When the clinical diagnostic methods do not furnish an accurate clue as to the cause of bleeding, gastroscopy may be of great value. From experience we are of the opinion that it is often advantageous and advisable to combine esophagoscopy with gastroscopy in carrying out a search for unexplained bleeding in the upper portion of the gastro-intestinal tract. Lesions about the cardia, especially, may be overlooked if both methods of examinations are not employed. It is not safe to assume that either esophagoscopy or gastroscopy alone constitutes a complete inspection of the esophagus and stomach. It must be emphasized constantly that the entire interior of the stomach cannot be thoroughly inspected with the gastroscope, and a negative result of gastroscopic examination does not eliminate the stomach as a source of bleeding.

The question always arises as to how soon a patient who is suffering from bleeding of unexplained origin in the upper part of the gastro-intestinal tract should undergo gastroscopy or esophagoscopy. In large measure this is dependent on the degree of bleeding . For those patients who have had massive hemorrhage, it is advisable to postpone gastroscopy until the bleeding has been brought under control and the patient's general condition is such that the element of risk has been eliminated. On the other hand, esophagoscopy can be carried out in the fact of active bleeding, especially if the bleeding is thought to be esophageal in origin. Esophagoscopic procedures often are of value in controlling hemorrhage of esophageal origin. The most suitable time to perform both gastroscopy and esophagoscopy is as soon as active bleeding has subsided, when the trickle of blood may lead the examiner to the site of bleeding. If too long a period is allowed to elapse after bleeding, the source of the hemorrhage may have disappeared, as is likely to be the case in erosive gastritis.

A considerable number of our cases illustrate the types of lesions in which endoscopic procedures have proved to be of value in determining the origin of gastro-intestinal bleeding. Occasionally shallow ulcerating lesions or nodular infiltrations of the stomach may not be seen by the radiologist but they can be demonstrated readily with the gastroscope. We recently have had such a patient with persistent melena, whose lesion was revealed by gastroscopy and confirmed by surgical exploration.

Peptic ulcers, especially when located in the upper portion of the stomach, may be demonstrated by the gastroscope, even though results of repeated roentgenographic examinations have been negative. Both esophagoscopy and gastroscopy may be helpful in the recognition of esophageal and gastric varices. At times such varices roentgenographic detection. It is important that those patients who are possible candidates for treatment with injections through the esophagoscope undergo gastroscopy to exclude the presence of varices in the stomach.

Esophagoscopy may be particularly helpful in the detection of bleeding lesions at the cardial orifice of

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THE USE OF THE FLEXIBLE TUBE IN THE DIAGNOSIS AND TREATMENT OF DISORDERS OF THE ESOPHAGUS

EDWIN BOROS, M.D.

In June, 1949, at the annual gathering of the American Medical Association in Atlantic City, New Jersey, a flexible esophagoscope was presented which, in the author's judgment, would transform the accustomed instrumental approach in the diagnosis and treatment of disorders of the esophagus. The need for such an accomplishment is apparent, for prior to this time, the accessibility of this organ to diagnostic measures or therapeutic manipulation was as limited as it was confined by the two practical methods in common use—the roentgen ray and the rigid esophagoscope.

When Kussmaul contributed his epoch-making observations in 1868, an avenue of investigation was opened which gave promise of unbounded opportunities for research and expansion of our knowledge of this organ. Soon other workers were drawn into the field. Among the notables were Mikulice, a surgeon, and Killian, a laryngologist. The latter's contribution brought about a close relationship of his specialty to endoscopy, which has been maintained up to the present time. Hence, it is not unnatural that esophagoscopy came to be regarded as a surgical procedure.

To be sure, the introduction of an esophagoscope has always been viewed as a serious undertaking, one not without its many dangers and catastrophes usually resulting from inexperience. Its passage in the past has been limited to those who, as a result of intensive training and unusual skill, were able to carry out this difficult procedure. It is obvious, therefore, and not at all surprising, that neither patient nor clinician would be overly enthusiastic in being the subject on the one hand, or the motivator on the other, save for those extreme situations where there could be no alternative. An emergency such as a foreign body or need for biopsy has been the main field for esophagoscopic usefulness. The picture that lies before us with the use of the rigid tube is one of fear and reservation. The performance itself is in every sense an operation conducted in a surgical atmosphere with all its embellishments. Internes actually witness very few cases during their hospital tenure and too often have to run over to the Nose and Throat Department to observe them. The labors of Paulson and Benedict among other gastroenterologists have brought the esophagus a bit nearer by their expanded clinical horizons incorporating this instrumental phase within the framework of their gastroenterologic concepts and practice.

The perfection of x-ray diagnosis in the early part of the century was a milestone in the acquisition of knowledge of the gullet. It was not long before both surgeon and clinician shared the confidence of the roentgenologist in a concerted reliance on this form of examination for both diagnostic and therapeutic purposes. The value of an esophagram is directly related to one's success in interpreting its silhouette or alteration of shadow. Unfortunately, because of anatomic reasons, the latter is dependent upon some form of obstruction or sacculation for its worth. The x-ray serves well in the detection of anomalies, spasm, stenosis, neoplasm, and in the recognition of peptic ulcer and varices. It cannot establish the existence of inflammation, mucosal ulceration, local points of bleeding, angioneurotic, edema, scleroderma, tuberculosis, lues, nor differentiate with certainly between benign and malig-

nant neoplasm. Therein lies the need for direct instrumental inspection of the esophageal lumen.

Up to the present time, nothing has superceded direct inspection of the esophageal lumen as a diagnostic measure.

Anyone, with a little training, can introduce a flexible esophagoscope. The procedure is simple and safe. The patient is not subjected to any ordeal. The intense surgical preparation, so indispensable in the use of the rigid tube has not been found necessary. These conclusions are the result of our experience in performing flexible tube esophagoscopy in more than four hundred patients. These included diagnostic surveys, removal of foreign bodies, dilatations for stricture, injection of varicosities, in addition to the performance of a few gastric biopsies.

The preliminary preparation and technique has been amply described in previous publications.

The factor of safety resides in the soft spiral tip of the author's instrument. It is important to point out that flexible tube esophagoscopy does not imply blind introduction. As soon as the pharangeal barrier is traversed, visual guidance is immediately resorted to with simultaneous insertion of the scope into the deeper recesses. Ast withdrawal of the mechanism is attempted, inspection is similarly continued to insure a thorough and detailed survey.

It would be serious if the impression prevailed that force or the disregard of asepsis would not give rise to trouble. Under no circumstances is rough handling to be countenanced. Specific contraindications to instrumentation must likewise be observed. Patients with fever, extreme debility, aneurysm, cardiac disorders, and dyspnea would not be considered proper subjects. A high-lying lesion is a contraindication to the use of the flexible esophagoscope. Such cases require direct visual guidance at the outset. These are, however, in the minority. With the institution of this new form of esophageal technique, a safe and simple method of exploration has been established quite unlike that which has hitherto been possible. The manifold disorders of this vital organ with its array of surrounding structure is brought within easy reach of the clinician and surgeon. Examinations can be carried out routinely and repeatedly. At their completion, both subjective complaints and objective fears are absent. The internist can embark on a more frequent and detailed study of his patient, and the surgeon is offered an opportunity for more extended pre- and post-operative observation. Local treatment can be carried out more readily because of the ease and safety that the flexible instrument affords. A once formidable procedure, which was a deterrent to investigation and progress, gives way to the use of the flexible tube in the diagnosis and treatment of disorders of the esophagus.

THE DIFFERENTIAL DIAGNOSIS

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It is further pointed out that the operating gastroscope is giving us material by means of which we should be better able to correlate the clinical radiologic, gastroscopic, and the pathological findings in *gastritis*. The limits of normal gastric histology must be defined. More study is needed in classifying gastritis as to type and severity. Post-operative gastritis is probably not a separate entity. How often are patients symptoms due to gastritis? In the past, patients have been treated for gastritis when they actually had diffuse carcinoma or lymphoma. Such serious errors in diagnosis are preventable by the use of the operating gastroscope.

"GASTRIC POLYPS"

JAMES B. CAREY, M.D., and LYLE J. HAY, M.D.

At the 1947 meeting of the American Gastroenterological Association we described characteristics of the polyps we found with the gastroscope in seventy-one stomachs during an eleven-year period. We have continued to study this group. Some individuals have been lost, others have been added. Some patients have been dismissed from surveillance, notably those with single, flat domed or short, columnar polyps with normal gastric mucosa and secretion of hydrochloric acid.

This report concerns sixty-four patients with single or multiple, benign or malignant gastric polyps. In none of thirty-one instances was the stomach explored surgically, but the existence and character of the one or many polyps were verified in each case by several gastroscopic and roentgenographic examinations. Polyps have been removed from thirty-three stomachs and have been examined microscopically; nine were adenocarinomas, twenty-four were adenomas, one of which subsequently recurred as adenocarcinoma.

Recapitulation

Adenomas—55 Operations—24 5 benign recurrences
1 malignant recurrence

Atrophic mucosa	44	Male	36
Achlorhydria	42	Female	19
Pernicious anemia	13	Ages	26-79

Adenocarcinomas—9 Operations—9

Atrophic mucosa	8	Polypoid	1
Achlorhydria	8	Hypoacidity	1
		Pernicious anemia	2

Male 6 Female 3 Ages 38-81

Living after 9 gastric resections for adenocarcinoma.. 6

Living after 18 gastric resections for adenomas..... 17

Living after 6 polypectomies..... 6

The symptomatology of gastric polyps is not distinctive. The complaints, if any, could be attributed to associated achlorhydria, anemia, bleeding, or else were not related to the stomach.

Through the gastroscope, benign polyps, the adenomas appeared as small, flat-based domes, or, low, round-topped columns with smooth surfaces and uniform color. The margins of the bases were well defined . Some were pedunculated, some had adenocarcinomas, had uneven, irregular surfaces with grey or pearl white mottling, blotches or streaks. The bases were broad and merged more or less with the surrounding mucosa. If pedunculated, the stalk was thick, stiff and held the polyp wholly or partially fixed.

The association of atrophy, achlorhydria or pernicious anemia with gastric polyps is not indicative of the benign or malign nature of the tumor. Adenocarcinoma may grow independently in stomachs with single or multiple benign adenomas.

The capability of metamorphosis of benign to malignant growth has not been clearly established, although in one instance adenocarcinoma appeared in the residual gastric pouch after an unquestionably benign adenoma had been removed with resection of the stomach. One single adenocarcinoma was noninvasive, that is, cancer in situ. None of the adenomas had cell alterations which could be interpreted as deviation from a benign status.

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CASE REPORT

EDWARD B. BENEDICT, M.D.

A sixty-four year old man was referred to the hospital because of pain in his stomach and loss of fifteen pounds in weight. X-ray examination previous to admission was reported as showing a gastric ulcer.

GASTROSCOPY: Anesthesia, 4% Cocaine gargle; Instrument, Bedecist Operating gastroscope. The gastroscope passed readily although there was a slight delay at the cardiac orifice. There was a considerable amount of fluid and blood in the stomach, which was aspirated through the gastroscopic aspirating channel. A satisfactory view was obtained after aspiration and after putting the patient in moderate Trendelenburg position. On the lesser curvature of the angulus there was an irregularity which extended all the way up the lesser curvature, probably close to the cardiac orifice. This was ulcerating, bleeding, and nodular. It seemed to extend well onto the posterior wall. It appeared rigid and did not respond to air inflation. A satisfactory biopsy was obtained which was reported colloid carcinoma.

An exploratory operation using the trans-thoracic approach was performed and the lesion was found to be inoperable carcinoma of the stomach with liver metastases.

COMMENT: Although there was clinical suspicion of gastric carcinoma, x-ray examination prior to admission revealed only a gastric ulcer. The patient was referred to the hospital for gastroscopy which indicated probable extensive carcinoma. This was confirmed by gastroscopic biopsy which showed colloid carcinoma.

"GASTRIC POLYPS"

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From our experience the term adenoma or adenocarcinoma may be properly applied to a gastric polyp recognized by either gastroscopic or roentgenographic examination, or by both, in a stomach with atrophic mucosa which does not secrete hydrochloric acid when stimulated by histamine. The appellation "polyp" may be used for a small protuberance of the lining surface of a stomach with normal mucosa which secretes free hydrochloric acid.

THE ROLL OF GASTROSCOPY

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the stomach. We have recently observed a patient who had a pedunculated polypoid tumor just below the esophagosgastic junction. This was not recognized at roentgenographic examination. The endoscopic diagnosis was substantiated at transthoracic exploration.

In the complete manuscript of this paper a case was reported in which tuberculosis ulceration of the stomach was responsible for bleeding. Gastroscopic examination was particularly helpful in the diagnosis of the disease and in the continued observation of the patient.

In many cases erosive and ulcerative gastritis may be responsible for gastro-intestinal hemorrhage and gastroscopy is essential to the diagnosis. The gastroscope is particularly helpful in the demonstration of bleeding lesions in the stomach after operation. The roentgenographic method is usually accurate in detecting the source of hemorrhage in the digestive tract. Endoscopic procedures, however, may serve as a useful adjunct in the detection of such bleeding lesions.

GASTROSCOPIC INSTRUMENTS

When it is realized that up to the beginning of World War 11, gastroscopic instruments were manufactured entirely in Germany, it is commendable that the American companies, through careful study and research and using American manufacturing methods have been able to produce the excellent types of gastroscopes that are available to the operators of today. In recent years the companies making these instruments have been extremely cooperative in consulting members of this Society, in regard to improvements in the manufacture of the gastroscopes. At the present time they are all diligently working to improve the efficiency of the gastroscope and to develop instruments for esophageal examinations. Following is a list of these companies and the details of all of these instruments may be obtained by writing direct to the manufacture indicated:

Cameron Surgical Specialty Co., 666 W. Division Street, Chicago 10, Ill. Manufacture the standard flexible gastroscope and the Omniangle scope, together with accessories.

Metro Tec, 820 N. Orleans Street, Chicago 10, Ill. Manufacture the Schindler Flexible gastroscope, improved model.

Eder Instrument Co., 1849 N. Halsted Street, Chicago 14, Ill. Manufacture the Eder Flexi-rigid and Flexible gastroscope and also the Eder Chamberlin gastroscope or the Model 400 which contains a mechanical means of flexing the objective or flexible end of the scope.

American Cystoscope Makers, Inc., 1241 Lafayette Avenue, New York 59, N. Y. This is the newest manufacturer in the field and they offer several flexible examining gastroscopes, also a flexible operating gastroscope containing a biopsy forceps.

TELEVISION DEMONSTRATION

During the Interim Session of the American Medical Association in Washington, D. C., in December, 1949, the Remington Rand Vericon television apparatus used daily on the regular program, was made available for experimental work at night. The Remington Rand engineers finally obtained the gastroscope image in the Vericon picture tube in sharp focus and on Thursday, December 8th, to a small group of scientists and officials of the AMA, the gastroscopic image was shown from a patient for the first time by television.

On the television monitor the image was about three inches in diameter but on the large projection screen where the regular television broadcasts were presented, the gastroscopic image was over three feet in diameter with good definition.

For purposes of record, the engineer in charge was Mr. Wm. L. Norvell of the Remington Rand Company. The patient who volunteered for the examination was Miss Mable Tucker who presents a case of hypertrophic gastritis. The gastroscopist was Dr. Roy Lyman Sexton of Washington, D. C., and his scopes were used for this demonstration.

It is hoped when perfected that television cameras, in combination with the gastroscope will furnish a view of the stomach clearly to a large number of observers. A rotating scope equipped with a split eye piece will make the image continuously available to the audience and to the operator at the same time.

At present plans are under way for a complete program of demonstrations at the next AMA meeting in San Francisco in 1950.

MINUTES OF THE ANNUAL MEETING

(*Continued from Page 1*)

E. B. Benedict, Dr. J. H. Fitzgibbon, Dr. H. J. Moersch and Dr. James L. Borland. It was moved and seconded that the nominations be closed and that a unanimous ballot be cast for these nominations. A unanimous ballot was accordingly cast by the Secretary.

Dr. Seymour Gray moved that a Fellowship be established by the American Gastroscopic Society intended to promote research in Gastroenterology. The amount of the grant and all other details concerned with this Fellowship were to be left to the discretion of the Governing Board. After much discussion a substitute motion was submitted by Dr. Donovan Browne to the effect that the question of establishment of a Fellowship be left entirely to the discretion of the Governing Board. This was seconded and passed by the members in attendance.

There being no further business, the business meeting was declared closed.

On Saturday, June 4, 1949, the following papers were presented as part of the program of the American Gastroenterological Association. In each case it was noted that the presentation was being made by a member of the American Gastroscopic Society:

1. The Differential Diagnosis of Benign and Malignant Lesions of the Stomach by Means of a Flexible Operating Gastroscope by Dr. Edward B. Benedict of Boston.
2. Gastric Polyps by Dr. James B. Carey and Lyle Hay (by invitation) of Minneapolis.
3. The Role of Gastroscopy in the Diagnosis of Upper Gastro-Intestinal Hemorrhage of Obscure Origin by Dr. H. M. Olsen and Herman J. Moersch of Rochester, Minnesota.
4. The Use of a Flexible Tube in the Diagnosis and Treatment of Disorders of the Esophagus by Dr. Edwin Boros of New York.
5. Gastroscopy as an Adjunct of Photofluorography in the Early Diagnosis of Gastric Malignancy by Dr. Moses Paulson and (by invitation) Dr. John F. Roach of Baltimore.

AMERICAN GASTROSCOPIC SOCIETY

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